

In the Claims:

Cancel without prejudice all the claims (Claims 1-16) now pending, and substitute therefor the following new Claims 17 - :

--(Claims 1-16 Canceled)

17. In an OFDM-based receiver, a channel sounder comprising:

A. means for extracting pilot signals contained in the OFDM received signal;

B. means for analyzing the pilot signals in the frequency domain and for issuing signals indicative of a distortion in each pilot signal, wherein each of said pilot distortion signals comprises both an amplitude and a phase component; and

C. means for analyzing the signals indicative of a distortion in each pilot signal and for computing therefrom corrective signals for correcting distortions in the received signal, further including means for computing an average distortion of two adjacent pilots and for using that average to correct the information between these pilots.

18. In an OFDM-based receiver, a channel sounder comprising:

A. means for extracting pilot signals contained in the OFDM received signal;

B. means for analyzing the pilot signals in the frequency domain and for issuing signals indicative of a distortion in each pilot signal, wherein each of said pilot distortion signals comprises both an amplitude and a phase component; and

C. means for analyzing the signals indicative of a distortion in each pilot signal and for computing therefrom corrective signals for correcting distortions in the received signal, further including means for computing, for each frequency between two adjacent pilots, an interpolated value of the distortion, and for using that interpolated value to correct the information at that frequency.

19. The channel sounder according to claim 18, wherein the interpolation is performed in the time domain or the frequency domain.

20. The channel sounder according to claim 18, wherein the interpolation is performed using a low pass filter or a FIR or convolver.--